ABSTRACT OF THE DISCLOSURE

A pipeline processing type shaping apparatus and method in which strict shaping processing can also be implemented for a connection at various speed by adding a simplified circuit configuration. A cache portion is provided that links with the processing of a pipeline processing portion, and this cache portion manages flow information of a packet that is being processed in the pipeline processing portion. When there is a packet that belongs to the same flow, the cache portion transfers a parameter to the pipeline processing portion assuming a virtual packet in which relevant packets are all connected. The pipeline processing portion executes pipeline processing based on this virtual parameter. Consequently, also for a flow at an optional peak-rate speed (reciprocal of the input packet interval that belongs to the same flow) and in any high-speed transmission path interface, a predetermined scheduling time by shaping can always be calculated in real time.